

## License Information

**Scope-** Tests a candidate's knowledge of the installation, maintenance, repair, fabrication, alteration, and extension of air conditioning, refrigeration, heating, ventilation systems, duct systems, warm air systems, low pressure boiler and unfired pressure vessel systems, solar heating and cooling systems, and related appurtenances unlimited in horsepower or tonnage.

## Examination Outline

### Open Book

**100 Questions – 4-1/2-hour time limit**

**75% Correct Required to Pass**

SUBJECT AREA	PERCENTAGE
GENERAL AIR CONDITIONING	20
HEATING – WARM AIR, BOILERS, SOLAR	20
REFRIGERATION	18
VENTILATION	10
FUEL GAS SYSTEMS	10
CONTROLS	8
PIPING	6
LOAD CALCULATIONS	5
INSULATION	3

## References

*The following special devices ARE allowed in the testing center in addition to the standard allowable test center devices:*

*ACCA Ductulator*, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206.

*TRANE Ductulator*, TRANE Company, c/o Inland Marketing Services, 3030 Airport Road, La Crosse, WI 54603.

*The following references ARE allowed in the testing center:*

*NFPA 58 - Standard for the Storage and Handling of Liquefied Petroleum Gases*, 2001 Edition, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

*International Mechanical Code*, 2000 Edition, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795.

*International Fuel Gas Code*, 2000 Edition, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795.

*Manual J – Load Calculation for Residential Winter and Summer Air Conditioning*, Seventh Edition, 1986, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206.

*Manual J – Residential Load Calculation*, Eighth Edition, 2002, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206.

*Manual D – Residential Duct Systems*, 1995 Edition, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206.

*Manual N – Commercial Load Calculation*, Fourth Edition, 1988, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206.

*The following references have been used to create exam questions but are NOT allowed in the testing center:*

*Low Pressure Boilers*, 2001 Edition, American Technical Publishers (ATP), 1155 West 175<sup>th</sup> Street, Homewood, IL 60430-4600.

*Modern Refrigeration and Air Conditioning*, Eighteenth Edition, 2004, Goodheart-Willcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243.

*Pipefitters Handbook*, Third Edition, 1967, Industrial Press, Inc., 200 Madison Avenue, New York, NY 10016.

*For information on how to obtain examination references, please call toll-free 877.624.2562.*

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